

REMARKS

Reconsideration is respectfully requested in view of the above amendments and following remarks. Claim 1 is amended. Claims 2-10 are canceled without prejudice or disclaimer. Claims 11 and 12 are added, and claims 1, 11, and 12 are now pending. Applicants respectfully submit that the revisions to the claims and application are supported in their original disclosure and that no new matter has been added.

Specification

The specification is objected to for improper disclosure of amino acid sequences without respective sequence identifiers. To comply with 37 CFR §1.821-1.825, Applicants respectfully submit a computer readable form (CRF) of the sequence listing, a substitute paper copy of the sequence listing, as well as an amendment directing its entry into the specification and a statement as required. The substitute sequence listing has been mailed to Mailstop Sequence along with a copy of the Notice to Comply, as required by the Office Action. With further particularity, SEQ ID NOs: 14-18 have been added to the sequence listing, which respectively correspond to sequences for CT120, CT120B, CT120-like, mCT120-like 1 and mCT120-like 2, and which are provided in Applicants' specification, for example at page 15, lines 28-33 and in Figure 1. Applicants respectfully submit that the specification is in proper form.

Withdrawal of the objection is respectfully requested.

Priority

Regarding the priority date, Applicants respectfully submit that this application enjoys the benefit of priority having the date November 27, 2002 for the reasons herein. As suggested by the Examiner, Applicants enclose herewith the English translations of the priority documents PCT/CN03/00845 and CN02150730.9. Applicants respectfully submit that the English translation of the international application PCT/CN03/00845 corresponds to the present application as filed on May 25, 2005. Thus, Applicants believe that this translation should be identical with the present application. As to the English translation of CN02150730.9, Applicants respectfully submit the translation is substantially identical to PCT/CN03/00845, where both priority applications include the

subject matter disclosed and claimed in the present application. In fact, the subject matter claimed is supported throughout the disclosures of these priority documents. For example, the drawings of PCT/CN03/00845 and CN02150730.9, which also are the same as that of the present application, disclose the features claimed. For at least these reasons, Applicants believe that they are entitled to enjoy the benefit of priority of PCT/CN03/00845 as well as CN02150730.9, which was filed on November 27, 2002.

Favorable reconsideration of this issue is respectfully requested.

Drawings

The drawings are objected to for informalities. Applicants respectfully submit a Replacement Sheet of Figures 2-4. The amended drawings are submitted to address issues raised in the Office Action and as suggested by the Examiner. The Replacement Sheet is attached herewith in the Submission of Replacement Sheets. No new matter has been added. Briefly, the Figures have been revised to include a figure label "Fig 3" for Figure 3 and a label for the y-axis of Figure 4. The specification has also been amended to include the reference characters "reverse" and "empty" shown in Figures 4 and 5 and to comply with the drawing requirements. Applicants respectfully submit that the drawings are in proper form.

Withdrawal of the objection is respectfully requested.

Claim Objections

Claim 2 is objected for informalities. The objection is rendered moot, as claim 2 has been canceled. Withdrawal of the objection is respectfully requested.

Claim Rejections 35 U.S.C. §112

Claims 1 and 2 are rejected under 35 U.S.C. 112, first paragraph, for lack of enablement and for lack of adequate written description. Applicants respectfully traverse the rejection to the extent it is maintained.

Claim 1 has been amended to remove the language "or its conservative variant polypeptide, active fragment or active derivative." Thus claim 1 is limited to a human CT120 protein polypeptide having amino acid sequence of SEQ ID NO: 2. Claim 2 has

been canceled without prejudice or disclaimer, rendering the rejection moot as to this claim. For at least these reasons, Applicants believe that the issues concerning the scope of disclosure and claims are overcome.

Favorable reconsideration and withdrawal of the rejection are respectfully requested.

Claim Rejections 35 U.S.C. §102

Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by He et al., Biochem. Biophys. Res. Com, September 27, 2002, 297:528-536, as evidenced by alignment 1, FA57_HUMAN in the Appendix (hereafter D1). Claims 1 and 2 are also rejected under 35 U.S.C. 102(b) by each of He et al., Chinese Journal of Cancer, February 2003, 22:113-8 (hereafter D2), and Ruben et al. (WO 2000/035937), as evidenced by the alignment 2, AAB24463 in the Appendix.

With respect to D1 and D2, Applicants respectfully submit that these references do not constitute prior art as alleged in the Office Action, because the present application is entitled to enjoy the priority of CN 02150730.9 which was filed on November 27, 2002. With respect to Ruben et al., Applicants respectfully traverse this rejection and submit that the claim 1 is not anticipated by Ruben et al for at least the following reasons.

As noted in the Office Action, Ruben et al. does not identically disclose the SEQ ID NO: 2 claimed.

Furthermore, there is no reasonable basis to assume that the sequence disclosed by Ruben et al. would be the same as the claimed invention. In the Office Action at page 21, last paragraph, the rejection contends that “[G]iven that there is 99.1% identity between SEQ ID NO: 2 and the product of the prior art, it would be expected that the claimed product has the same function that will promote the growth of NIH-3T3 cells. Although the reference does not specifically state that the CT120 protein promotes NIH-3T3 cell growth, the claimed product appears to be the same as the prior art product, absent a showing of unobvious differences.” However, Applicants respectfully disagree and submit that such interpretation in the rejection is inconsistent from the previous paragraphs in the Office Action. For example, in referring to the commentary on the 112 disclosure issues at paragraphs 9 and 10, substantial remarks are provided to show that

“the unpredictability of predicting function from structure in protein biochemistry is well known in the art,” “thus, sequence identity or similarity alone can not be used to predict the function of a protein,” “Although conservative substitutions increase the chance of having less effect on the activity of the protein, it is unpredictable which amino acid at a certain position could be substituted even by conservative substitution.” That is, such remarks may be true in the art of protein biochemistry, where sometimes even one mutation will result in great change of the function and property of a protein.

For at least the foregoing reasons, Applicants respectfully submit that there is no reasonable basis to assume that the product of Ruben et al. would satisfy the claimed invention in either its structure or function. The claimed invention is clearly distinguished from the prior art in both structure and there is no reason to expect that Ruben et al. would enjoy the same function as the claimed invention, namely promoting the growth of NIH-3T3 cells.

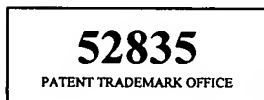
The claimed invention is further removed from Ruben et al. because Applicants’ disclosure provides a structure, which is clearly different from the reference. See Example 2.7 of Applicants’ specification, which describes the seven transmembrane regions and the potential functional domains. However, Ruben et al. discusses the structure of its polypeptide product in page 70, first paragraph of Ruben et al., where said polypeptide has been “determined to have two transmembrane domains at about amino acid position 119-135 and 182-198 of the amino acid sequence reference in Table 1 for this gene.” Moreover, the gene in Ruben et al. is found to be expressed primarily in fetal heart, so that it may be useful as reagents for differential identification of tissue or cell types present in a biological sample. However, the present protein is found to be expressed in heart, brain, placenta, liver, kidney, pancreas, skeletal muscle, but not in lung. Even further, the present invention focuses on that the CT120 protein is expressed in cancer cells in tissue of pulmonary cancer, while it is almost not expressed in the tissue near the pulmonary cancer, so that the present invention may be used to detect carcinomatous change or susceptibility for carcinomatous change in pneumonocytes. For at least the foregoing reasons, Ruben et al. is further removed from claim 1.

Accordingly, the Applicants believe that claim 1 is not anticipated and allowable.

Favorable reconsideration and withdrawal of the rejection are respectfully requested.

Conclusion

In view of the above amendments and remarks, Applicants believe that the pending claims are in a condition for allowance. Favorable consideration in the form of a Notice of Allowance is respectfully solicited. If any questions arise regarding this communication, the Examiner is invited to contact Applicants' representative listed below.



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Respectfully submitted,

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